

Using Mass Media Messages to Combat Teen Drug Use

Introduction

THE DELIVERY OF HEALTH MESSAGES through mass media can offer a cost effective and efficient method to address challenging public health problems (Noar, 2006). Youth drug use is one such public health problem. Against a backdrop of literature on the effectiveness of public health campaigns, this brief will present a summary of the scientific and practical reasons why mass media may be a particularly appropriate mechanism to disseminate prevention messages to teens on drugs. The brief will conclude with a description of a particular public health campaign that uses this evidence to effectively deliver messages to teens against drug use: The National Youth Anti-Drug Media Campaign (NYADMC).

The effectiveness of mass media messages to promote healthy behaviors

Mass media messages on health behaviors stand alone, but have greater impact when integrated into a campaign. A public health campaign is an organized set of communication activities focused on a specific behavior change goal that is delivered to a large number of individuals across a limited time period (Rogers & Storey, 1987). A media-based public health campaign communicates those behavior change messages through mass media, such as television, radio, print media, or online channels.

There is evidence that media-based public health campaigns may effectively change behavior (Derzon & Lipsey, 2002; Snyder et al., 2004). More specifically, a meta-analysis of multiple campaigns in the United States shows that the average effect size of such campaigns is around $r=.09$, suggesting that each campaign, on average, changed the behavior of 8 percent of the population exposed to the message. Although this is a modest effect in absolute terms, media-based prevention campaigns reach many people simultaneously and uniformly, providing a platform for widespread behavior change. Such broad reach is ideal for prevention efforts on a public health problem with wide prevalence, such as teen drug use. Recent examples of successful media-based public health campaigns in the field of teen substance abuse include campaigns preventing cigarette smoking (Farrelly, 2005), alcohol use (Gomberg, Schneider & DeJong, 2001) and binge drinking

(Glider, Midyett, Mills-Novoa, et al., 2001). However, campaign effects are more modest for substance abuse prevention campaigns. Campaigns on alcohol prevention have an average .09 effect size, while anti-smoking campaigns have an average effect size of .05, and anti-drug campaigns average a .02 effect size (Snyder, 2007).

Campaign effects are closely tied to campaign outcomes and targeted, theory-based, and research-driven efforts are more successful than those that are not (see Noar, 2006 for a review). Two key predictors of a campaign's desirable impact on behavior relate specifically to the extent which the messages are: 1) relevant to and resonate with members of the target audience, and 2) delivered to the target audience with adequate reach and frequency to be noticed and remembered (Noar, 2006; Randolph & Viswanath, 2004).

In short, media-based public health campaigns are a scientifically validated approach for promoting behavior change. Furthermore, characteristics of successful prevention messages can be applied by campaign developers to create campaigns with a high likelihood of success. Building from the empirical base for the approach's effectiveness, there is also a significant practical reason for using mass media to deliver drug prevention messages to teens. The media is one environment where youth are already learning, interacting, and exploring the topic of drug use, and sharing information with their peers about drugs via social networking (Moreno & Richardson, 2007). The section below discusses teens' media habits and their exposure to drug-related content in media environments, and concludes with an analysis of why anti-drug messages in the media may be particularly important for prevention efforts.

Teens' media habits and their exposure to pro-drug content in media environments

Teens are huge media consumers, spending an average of 72 hours a week using electronic media such as TV, Internet, movies, and music (Olson, 2006). The amount of time teens spend with media on an average week far outweighs time spent in school or time talking with parents, and media messages af-

fect youths' knowledge, attitudes, and behaviors, whether that relates to purchasing decisions or health behaviors (Strasburger & Donnerstein, 1999).

The delivery of drug prevention messages to teens through media channels offers two potential advantages to public health campaigns. First, media provides the high reach and frequency that is closely linked to campaign success, described above. Second, media-based prevention messages provide a counterpoint to "the competition" -- pro-drug influences -- which are rife in media environments and correlated with teens' risky decision-making (Klein et al., 1993) and drug use (Primack et al., 2008). For example:

- Approximately 4.5 million teens view pro-drug websites annually, and teens that view pro-drug websites are more likely to report other high-risk characteristics such as having friends that use drugs, previously using inhalants, stronger intentions to use marijuana, and lack of parental monitoring of activities (Belenko & Dugosh, 2007).
- Up to 80 percent of popular rap songs contain at least one reference to illicit drugs, particularly marijuana and stimulants (Brookshire et al., 2003).
- Stern (2005) found that 2 out of 5 teen characters in the top grossing films from 1999-2001 drank alcohol, and one out of seven used illegal drugs. No character refused offers to drink or use drugs, and the negative consequences of drug use were rarely illustrated. Female characters were more likely than male to use multiple drugs. Stern suggests that messages about alcohol and drugs in film may model unhealthy behavior to youth.

The high levels of media exposure to pro-drug messages are a public health concern, because youth knowledge, attitudes, and behaviors about risky activities can be shaped by media exposure (Strasburger & Donnerstein, 1999).

The presence of anti-drug messages in the media may be critical to prevent drug use. The ubiquity of media messages about drugs like marijuana creates ambivalent attitudes about it in many teens (Zhao, 2005), in that teens are exposed daily to conflicting messages about its risks and benefits. Ambivalent attitudes are mutable and open to influence (ibid), so the presence of persuasive anti-drug messages in a media environment may offer teens an alternative viewpoint and encourage them to resolve ambivalent attitudes in a healthy way. Indeed, highly ambivalent teens are more likely to be beneficially influenced by anti-drug messages (Zhao & Capella, 2008).

The most likely source of anti-drug messages in a media environment is a public health campaign with the specific goal of reducing teen drug use. One such campaign is the NYADMC. Below, we discuss the history and goals of the NYADMC, its practical application of public health best practices, and how it uses media to maximize its reach to teens.

The NYADMC as an exemplar media-based public health campaign

Launched in 1998 under congressional mandate, the NYADMC uses paid media to reach youth ages 14–16 with messages to discourage first time use of illicit drugs and to encourage occasional drug users to stop using. The NYADMC messaging focuses on illicit drugs of first abuse, such as marijuana, which is the most widely used illicit drug among American youth (Johnston et al, 2009; NSDUH, 2006). Data from 2008 show that 11 percent of 8th grade students, 24 percent of 10th grade students, and 32 percent of high school seniors used marijuana in the previous year. Despite common misperceptions, marijuana use is addictive (Crowley, 1998) and is associated with negative consequences. For example, regular marijuana use is associated with cognitive deficits in learning and memory (Bolla et al, 2002), and poor academic performance (NSDUH, 2000). Marijuana is also associated with risky behaviors, such as delinquency, multiple sexual partners, use of other drugs, and violent behavior (Brook et al., 1999; Greenblat, 1998). National surveys indicate that teen marijuana use has decreased substantially since the mid 1990s: a decrease of over 40 percent among 8th graders, 30 percent among 10th graders, and nearly 20 percent among 12th graders (Johnston et al., 2006).

To prevent teen marijuana use, the NYADMC incorporates best practices from the social marketing, health communication, and prevention fields to develop, test, refine, and target campaign messages. Taking into account the two key predictors of campaign success discussed above, NYADMC emphasizes development of relevant messages and the delivery of those messages with high reach and frequency.

To ensure relevance, NYADMC messages are developed with significant audience input, gathered through formative research. All TV ad executions are copytested to ensure they are effective, memorable and thought-provoking. There is evidence that NYADMC advertising is "buzz-worthy" and that interpersonal conversations about NYADMC messages may bolster knowledge and protective beliefs about drug use. Indeed, a study by Longshore and colleagues (2006) found that the positive and protective impact of a school-based prevention program was magnified for students who also reported seeing NYADMC messages. More specifically, marijuana use in the past month was significantly less likely among adolescents who received the school prevention curriculum and reported awareness of campaign advertising.

NYADMC messages are also delivered with high reach and frequency. Campaign data show that 64 percent of teens reported seeing a NYADMC advertisement in 2008. Because there are more than 21 million teens in the United States (U.S. Census, 2006), one may roughly extrapolate that 13.4 million teens see at least one NYADMC advertisement each year. Using a .02 effect size, a yearly estimate is that more than 250,000 teens

Figure 1:
NYADMC Interactive Advertising on MySpace and Google



NYADMC
on MySpace



NYADMC on
Google

may potentially change a behavior due to campaign messaging, under optimum conditions. That said, the complexity and national scope of the campaign make it challenging to evaluate the campaign's specific effectiveness. Research from early in the campaign's history suggested that that the campaign was not associated with protective changes in youth drug use (Hornik, 2008). However, more recent studies report that exposure to NYADMC messages is associated with more protective beliefs and intentions toward marijuana (Longshore, Ghosh-Dastidar & Ellickson, 2006; Palmgreen et al., 2007).

NYADMC messages are also delivered through multiple types of advertising, targeted to highly teen-specific media, and delivered as close as possible to moments of decision about drug use. For example, the NYADMC advertises out-of-home in shopping malls, movie theaters, and arcades. These locations are often unsupervised for teens, and the presence of anti-drug messaging there may thwart high-risk behaviors. Interactive advertising for NYADMC websites can be pushed out to social networking sites and search pages when drug use terms are entered into the text (see Figure 1). In these ways, the NYADMC attempts to reach teens with health information at critical points for decision-making.

Conclusion

The NYADMC is a large-scale public health campaign that uses mass media to reach youth with messages against drug use. There is substantial scientific support for this approach. Media campaigns have great reach, which may translate small effect sizes into significant population-based behavior change. Media campaigns create buzz, and resulting interpersonal discussions about campaign messages can maximize other prevention efforts. Media campaigns also reach people in environments where they are already exposed to information on sensitive topics like

drugs. For youth, this phenomenon may allow for a two-sided exploration of the topic of drugs and encourage development of healthy, protective attitudes and beliefs.

Citations

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